

TWIN CITY ATARI INTEREST GROUP NEWSLETTER

MAY 1983

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APRIL MEETING NOTES

The TAIG bulletin board system (BBS) has undergone some modifications which are intended to enhance its reliability. To access it you need computer, an interface, a modem and a terminal program. Most terminal programs require information to be input before they go into the terminal mode, in the case of the TAIG BBS set Baud to 300, Parity to None, and Translation to ATARI or ASCII. BB# is 432-3779.

A computer newspaper called The Twincity Computer can usually be found at dealers for free, it contains many current BBS numbers.

A reminder that articles are always needed for the newsletter, if your article is "accepted" for publication you are entitled to a free disk of the month.

Last month TRB tried a new layout for the newsletter and at this meeting asked for a preference, indicating the old layout was easier to work with. Naturally the membership responded that they liked the new layout better. There must be a moral in there someplace.

The membership is up to 358. Since this is the time for the first batch of renewals, there will probably be a drop by next month. For those who plan to renew and sent in an \$8 renewal fee, there was an oversight on the application in regards to that \$8 renewal fee. It has been discontinued and any application sent in with \$8 will be renewed for 10 months rather than 12. Apologies are extended for the oversight.

A report from the treasurer indicated that there was \$600 in the treasury, with the newsletter costing \$260 this month.

The ANALOG disk is available at meetings for SUBSCRIBERS at \$2.50 (disk costs) or you may leave a formatted disk with Bill Sommers, 432-0395, and pick it up with the programs on it at the next meeting.

The regular disk of the month is available to all members for \$4 (cassette-\$3) at the meeting. There are some back issues available.

A show of hands was asked for as to preference for the new meeting location VS the old one, the new was favored by a clear majority of those who raised hands. In a similar manner the attending membership was asked to pass judgement on the dominance of game programs being demoed for meetings. Slightly more "voted" for less games than keeping the quantity of games the same. (It is no wonder that an ATARI computer club member is exposed to many games, taking into consideration the "superior game ability" of the machine. However that strength has had the unintended side effect of implying the machine is good for "only" games. This is the nonsense that many members would like to see dispelled with more support by that element of the club that is interested in "serious" applications. How about a "NO GAMES SIG".)

Service reports gave ENTRONICS a "fixed in 24 hrs" and USER FRIENDLY a "couldn't fix a disk drive" and a "satisfied but left dirty contacts."

ATARI is selling warranties on the computer and peripherals, but at what price- come on ATARI, we need a price we can afford!

Due to conflicting holidays, the MAY meeting will be the 22nd rather than the last Sunday of the month. This will be the ELECTION meeting where you can vote or not vote and be assured it won't make any difference since the election committee of one had to bend some arms just to get one nominee each per office. (in the way of

a signoff for this secretary, let me mention that in scanning the various newsletters of the other user groups nation wide, a lack of PARTICIPATION seems to be a common malady suffered by many groups. TAIG was not organized with the intent of a few people doing a lot of work so a lot of people could sit back reap the benefits. Notwithstanding the \$10 membership fee for which the member "gets" something, members should view the group as requiring some "time and effort" contributions also. Of course new members may claim they have little other than the \$10 membership fee to contribute, but the point is that as they learn about the computer they will reach a point where they can be of help to the next "batch" of new members, etc. This comment is not intended as a indictment of the membership, but as an encouragement to keep in mind the need of a group such as this to be supported through membership "time & effort" contributions.)

WHAT GAME FAIR?

It seems that either no one is interested in another game fair or no one reads our newsletter. Only one of you yahoos out there volunteered a computer for the thing. Really now, how is this user's group supposed to work if no one volunteers their time and/or equipment. If no oneone actively participates in the user's group then it will go down the drain. This thing will only be as good as the members actively involved and I think with our group approaching 400 members there should be more people doing things for the rest of the group. Shame on you. There will be no game fair in May due to a lack of interest. Maybe later, huh?

General Information

We are developing an English as a Second Language (ESL) program which will use interactive video and computers. Would anyone be interested in working with us to develop a curriculum, write the software, or give ideas? Also, can anyone build an inexpensive module to interface a video tape recorder to the ATARI? Contact Russ or Tricia McGlenn at 434-5047, Anoka.

ADVENTURE HINTS by PHIL SEIFERT

These are the latest from the grapevine.
Zork I: Let the thief take the egg, it's more valuable when you get it back (if you can).
Savage Island part I: Pour sea water on a hot rocky cliff and get salt for the bear.
Savage Island part I: You need a log to recover items from the lake.

If you have hints for adventures then I would greatly appreciate your sharing them with the rest of the members of our user's group. Send them to me, Phil Seifert, 48 Kelley Road, Chaska, MN 55318. Maybe if we all help out, we will get loose from these darn things.

FRPG'S AND COMPUTERS

by Greg Howell

This is a column dedicated to those of us who play FRPG's (fantasy role playing games) and own computers. This month (the first for this column) I am going to be quite general because I'm not to sure what you want out of this column (and what I want also). So first lets talk about what computers can do and what they can't. First they can store, display and manipulate data (to some extent), second they can retain this data indefinitely. Finally they can do all this in very short period of time (in other words they're fast). And now the bad stuff. The human interface (generally the keyboard) is slow and clumsy. They're hard for more than one person to use at the same time. And lastly they can only do one thing at a time (although there are some large computer that can do more than 1 thing at a time) So to make computers work for us we must dwell on there good points. And now for some personal experiance, I've found that for FRPG's there are several do's and don'ts, one is that players like to creat there own characters and simply refuse to play with a computer generated character (no matter how good it is). Next combat generally is far to complicated to be handled by computers not that they could handle it but the program would be huge, here's an example. Pathfinder A 7th level ranger is riding throught the gnarlev forest on his way to the city of grayhawk when he is ambushed by a lone red dragon out for a small snack. Now here's where it get complicated. Pathfinder can use spells, or try to beat it up (with 1 of his 6 weapons). and the dragon can use spell, claws, teeth, breath (fire), ect..... just think of the amount of data and the size of the program to handle just that little skirmish (by the way pathfinder survived that battle and now runs his own fast food place in grayhawk (he had to do something with the dragon)). Finally the part you've been waiting for where I tell what the do's are or at least what I've use my computer for. One, to store descriptions of room. Two to set up pc's (player characters), for an example in a game I have called villains and vigilantes the players only need 6 random numbers for the character and 20 other number found by combining the original stats and by going through about 5-7 tables. This process sometimes takes 30 minutes per player and if you have 6 players needing characters that three hours work spent that you could have used playing. So I wrote a program that did all the playing around with the numbers. All they do is enter there 6 stats and in less than a second the other 20 stats are on the screen. And finally the creation of npc's, (non-player characters) this process is slow normally and generally takes as long as creating pc's, the computer reduces this to seconds. Well that about does it for this month as for next month I'm planing a look at dice and random number, and will explain then diffarence between rolling 2 6-sided dice (here after 2d6) and 1 twelve sided (1d12) unless someone out there can think of something else they would like to know. Please, feel free to bother me about it (my phone and address follow).

so for now T.T.F.N

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ENDIT/ENDIT/ENDIT.....

CHILDREN WILL PLAY

by PHIL SEIFERT

Hello, there. I am still around despite a close call with an irate programmer who didn't like my review of his program. He ran over to my house all the way from Apple Valley and when I opened the door he grabbed me by the neck, lifted me up so high I bumped my head on the ceiling. Of course, my brave dog ran into the bedroom and wasn't heard from for over five hours. Naturally, in self-preservation, I acceded to his demands and will give him a better review. The name of the program is Creepers and is being marketed by Silicon Valley Systems Software. This is basically a seek and find graphic adventure. It will run on a 16k cassette or 32k disk. You have eight characters at your disposal. Your mission is to retrieve the Golden

Chalice of Deblou. Of course, like any good adventure, there are obstacles in your path. Watch out for the spring loaded arrows and the Creepers. This game is very good for a person who has only 16k and a cassette only. Ask for it at your favorite store. How's that Fred?

By the way, those of you who know me will realize that he couldn't lift me and if you ever met my dog, I am surprised you are still alive. This program really deserved a better review than what I gave it in a previous newsletter. The reason for the poor review the last time was I did not have any documentation except for a list of commands. Now that he has given me this, I can really see how much better the program is. I really suggest people with 16k cassettes get this if they like adventures. If you don't like it, come over to my house and my dog will show just how good it is.

For those of you who have more money and disk drives, then I can recommend to you Ultima II. Yep, it finally arrived. This is a single character role playing game that is in real time graphics. You have your choice of what kind of character you would like to be. Magic abounds in this game, particularly if you are a wizard. What I liked about this program is that it seems to be very involved for a graphic adventure. It is not a static adventure like Sierra On-Line's other adventures. Ultima II is similar in style to the now defunct Crystal Software's programs, but, it is better and is totally machine language. Just think, I could visit nine planets and get seduced in a bar. If you don't hear from me, I think you will know where I am. For \$60, you get a nice manual and a cloth map of the planet of Earth (nice touch).

I finally obtained a copy of the long awaited disk version of Zaxxon. I think I could keep waiting. Yes, it does have the surface to air missiles. Yes, it does have the 3-D effect in space. Yes, the robot Zaxxon moves around instead of just coming at you. But, I still think this one is not much better than the cassette version. Problem 1, there are not enough SAMs to worry about as in the arcade version. Problem 2, they seem to take a lot of leeway in the space shot. I keep getting killed when nothing should have touched me. Problem 3, it is really not as playable as the cassette version. You really get killed a lot and lose interest in it fast. Why do you only get 3 ships when the arcade Zaxxon gives you 5? I am sure there are people who are going to buy this one because of the name of Zaxxon. I think your \$40 would go better towards buying Ultima II. But don't let me sway you with silver words. When it comes out in the local stores, go check it out. I may not have liked it, but, you may.

Yes Virginia, there is an In-Home Baseball. A local store got one copy and they are keeping it for themselves for demonstration purposes. This program is worth the wait as it is definitely the best baseball program for the Atari. It comes on a 16k rom cartridge for \$50. Anyone can play, except for Todd Burkey, I have never seen anyone bat like that in my life. Just kidding Todd. This program will not be released on disk or cassette. Too bad.

I have heard somewhere, that, Dig Dug and Donkey Kong will be released from Atari sometime in June. Wouldn't that be nice. I have seen an early version of Dig Dug and I think they are doing an excellant job with it. They will come on a cartridge for I think \$45.

Thrax Lair is a new game just being released by Rantom Software. As near as I can tell, the goal is to fly up the cavern as fast as you can, passing the various creatures in your way. Of course you can shoot them, but, somehow I don't think that is the idea. Interesting program for 16k cassettes and disks. Rantom is also releasing Trust. According to their advertisement, it is a game for 1-4 players and has dazzling 3-D graphics and so forth. It is for 48k disks and cassette systems.

Adventure in Time has been released by Phoenix software. It is a text adventure that requires a disk drive and 32k. It is similar to Adventure International's original adventure series but somehow doesn't seem as nice. If you like text adventures then check it out, you may like it.

That wraps it up for this month. Hopefully I will have a lot more for you after the CE Show in Chicago. See you at the meeting.

BEGINNING ASSEMBLY BY TRB

This is the first of hopefully many articles on assembly code programming. What I hope to do is give everyone a rudimentary understanding of assembly code and what can be done with it by even the beginning programmer. In these first few articles, I will be tackling the task of teaching you how to read assembly code from the BASIC programmer's perspective. In other words, I might be able to teach some assembly language without your realizing it.

For those of you who know BASIC, the easiest way to read assembly code at first is by way of associating each particular assembly 'command' with a BASIC command or sequence of commands. At first you will need to do this by translating each command on paper, but soon you will discover that you can do the translation in your head and at that time you have done it; you can read assembly.

Luckily, 6502 assembly code is one of the easiest of the microprocessor codes to learn how to read and use. A paradox exists however in that it can also be described as one of the harder codes to program in. The reason for this is that the 6502 has fewer 'commands' available to it than most of the other microprocessors; hence it is easier to learn but more restrictive (challenging?) to program in.

Before you read any further in this article, go learn a little about HEX. It is described in your ATARI reference manual and a multitude of other places. I personally don't have 16 fingers, so I prefer to have others teach how to think in HEX. I can think in hex, but I ended up getting a hexadecimal calculator after several late night programming bouts when I found myself wishing for 16 fingers and toes. All that I will say about HEX as pertains to the 6502 is that since the 6502 has a 16 bit address range, the largest number you will have to worry about is one 16 bit word which has a range of 0000 to FFFF in hex (0 to 64K in decimal). In 6502 programming, the word will be used primarily in accessing specific memory addresses. The 8 bit byte is what you will become most familiar with. The byte has a range of 0 to FF in HEX (0 to 255 in unsigned integer decimal). One confusing aspect of working with bytes is that a byte can be both a positive number and a negative number at the same time, depending on how a particular command is interpreting the byte. To better understand this problem, you need only look back a couple of sentences and note that I said that a byte can fall between the range of 0 to 255. But how then can you have a negative value? The answer is that when you are thinking in terms of unsigned integers, you never do have negative numbers. If a command is interpreting a byte in terms of signed integer, then a byte can be thought of as having the range of 80 to 7F (-128 to 127 in decimal). To the newcomer this may seem confusing, but it is best just to remember that anything between 80 and FF is a negative number to any 6502 command that cares about negatives, and that FF hex is a -1 decimal. Throughout this series of articles, any time you see a dollar sign in front of a number, read the number as a hexadecimal number (i.e. \$4A is hexadecimal 4A).

Now that we know all about hex, it is time to take a look at how several assembly commands work. Most tutorials that I have seen like to cover subjects like addressing modes and other scary things right at first, but I prefer to jump right in and explain as I go along. The first codes that we shall cover will be those that involve modification and viewing of memory addresses. Keep in mind that in assembly code programming, you don't have variables, but you do use memory locations to store data in much the same manner as you use variable equates in BASIC. Additionally, you have 3 pseudo variables that you can use in 6502 code-the Accumulator, the X register, and the Y register. Each of these has a size of one 8 bit byte.

* 6502 command: LDA (Load Accumulator) *

BASIC Equiv.: A=

examples

assembly code	Basic code
LDA \$10	A=PEEK(16)
LDA \$10	A=16
LDA \$1000,X	A=PEEK(4096+X)
LDA \$1000,Y	A=PEEK(4096+Y)
LDA (\$10,X)	A=PEEK(DPEEK(16+X))
LDA (\$10,Y)	A=PEEK(DPEEK(16)+Y)

NOTE: DPEEK is a BASIC A+ command that performs the BASIC equivalent of PEEK(n)+256*PEEK(n+1). It comes in handy when working with 2 byte words. From now on, I will use P(n) instead of PEEK(n) to save on space. I also snuck in all of those nasty things I mentioned-indexed addressing, indexed indirect addressing, and indirect indexed addressing (the last three examples respectively.) As you can see the LDA command is the way you set your assembly code variable equal to something.

Other things do happen when the LDA command is used that aren't really expressible in BASIC. The 6502 has an 8 bit status register that is used primarily to keep track of what is going on when certain commands are executed. Each bit can be thought of as a flag that tells the computer the status in the form of a yes (bit=1,set) or no (bit=0,reset). The functions of these bits include telling the computer whether the last operation involved a negative number, whether the last operation resulted in a zero value, whether the last operation caused a carry to occur (yes, pretty much the same type of carry you are familiar with when adding a column of numbers, although this would be at the byte level,) and there are 5 more that you can look up in your favorite assembly code reference manual. As pertains to the LDA, the only bits that will get set are the Zero and Negative bits. These bits will become more useful when we look at the assembly code equivalent of the IF .. THEN statement in BASIC.

* 6502 command: STA (STore Accumulator) *

BASIC Equiv.: POKE memloc,value

examples-

Assembly code	Basic code
STA \$10	POKE 16,A
STA \$1000,X	POKE 4096+X,A
STA \$1000,Y	POKE 4096+Y,A
STA (\$10,X)	POKE DP(16+X),A
STA (\$10,Y)	POKE DP(16)+Y,A

The STA command stores accumulator data to a specific memory location. This command does not affect any of the status register bit flags.

* 6502 command: INC (INCrement) *

BASIC Equiv.: variable=variable+1

examples-

assembly code	Basic code
INC \$10	POKE 16,(P(16)<255)*(P(255)+1)
INC \$10,X	same as above-sub 16 with 16+X.

Now you can add by one in assembly code. Note that 255 plus 1 will wrap around and be equal to 0 again. This will cause the carry flag to be set. Other flags affected by this command are the Zero and Negative status bits.

* 6502 command: DEC (DECrement) *

BASIC Equiv.: variable=variable-1

examples-

Assembly code	Basic code
DEC \$10	POKE 16,(P(16)=0)*256+P(16)-1
DEC \$10,X	like above, replace 16 with 16+X

This command is just like the INC command, except that you are subtracting by one, so the value you are subtracting will wrap around from 0 to 255. Flags are affected in much the same manner as INC.

```
*****
* 6502 command: LDX (Load X register) *
*****
BASIC Equiv.: X=
```

examples-

Assembly code	Basic code
LDX \$10	X=P(16)
LDX #\$10	X=16
LDX \$10,Y	X=P(16+Y)

This command loads a value into the X register. You will usually see this command used in timing loops (load a value into the X register and then decrement it until it is equal to zero) or just before an indexed command (i.e. LDA \$10,X).

```
*****
* 6502 command: LDY (Load Y register) *
*****
BASIC Equiv.: Y=
```

examples-

Same as for LDX (swap all Xs and Ys)

This command is just like the LDX command and is used for much the same tasks.

Well, that is all I have time for this month. I suggest getting a reference manual for the 6502 code if you really want to get into assembly. It will prove useful for covering any blank spots I may skip over. Remember, there are 56 different commands in 6502 code that you will be learning about, and I have only covered 6 of them so far. Also, a lot of programming techniques and a better knowledge of how microprocessors work are fundamental to becoming even a fair assembly language programmer, so the skill won't come easy.

FROM THE EDITOR

Well, I guess we will be using the double column method for a while. To save me some time in reformatting, I will have to require that everybody submit articles with a left margin of 0, right margin of 50, and no justification. If you can, please use the methods outlined on the last page to submit your articles. Phone calls and letters won't necessarily make it into the newsletter since I may forget. I also need someone to take care of advertizing. This involves getting the ads on time and then trying to collect the money. Please contact me (Todd Burkey 542-1027) if you can help.

EVERYONE IN THE CLUB: If you respond to an ad in this newsletter, please be sure to let the advertizer know where you saw the ad. If you don't, we aren't going to have many advertizers left.

MUSIC
by TRB

I would like to mention that Mike Davis has put together several disks full of Advanced Music System music and given a copy of them to the club librarian. Mike has put a lot of time into orchestrating some fairly complex pieces of music into the AMS system and they are quite impressive to listen to. Mike also talked to Lee Actor (author of AMS) when he was in California recently and got some music that Lee put together. For those of you interested in music (I never was until I started playing around with AMS), feel free to join the MUSIC SIG at the next meeting. Maybe I can get Mike to come and demo the AMS system as well (Mike was the one that got me into that Reverb sound setup that I described in the newsletter several issues back.) For those parents out there, I can say that I sure wish that I had had the AMS when I was in school. I would have paid more attention in music class.

Lots and lots of new stuff this month. Rumor has it that the 400 and the 800 will be discontinued, probably sooner than most people had thought. Looks like there might actually be a 600 model released and even a 1201XL in addition to the 800XL. Boy, I am glad I have an 800! I got a chance to look over the 1200xl memory map and OS variable changes, and I don't really think the changes were worth the amount of incompatibilities they created. I will have a copy of these changes at the meeting if you want to glance through them, but I really don't think they are worth reprinting here. A new style of Joysticks are out that Phil has been raving out. They are easier on the hands and less expensive than the WICOs. Wait and check them out at the meeting. Also, WICO announced that they will have a new lower priced (under \$20) joystick out later this year. Atari 850 interfaces are now available again after a long dry spell. Atari must have sold enough of their 825 and 1025 printers.

I got in some copies of BASM, a new BASIC compiler, and have to say I am quite impressed with the work that went into the program. BASM is a cross between an advanced BASIC and assembly language. You will use this program more like you would a new language (rather than taking a BASIC program and compiling it). The program includes a text editing capability, macro defining, an edittable runtime library, and more. It compiles quickly and more efficiently than the code I saw output from DATASOFT's BASIC compiler. It also produces code that runs faster than the other two compilers that are on the market today. If you are thinking of learning assembly code, this program would be a great aid. It would even rate forming a special interest group if we can get enough people interested. Check out the COMPILER review in last month's ANALOG magazine. Atari's Family Finances is out and looks very good. They finally released a database program that doesn't require you single drive owners to constantly swap disks. The software provides good cash flow and budget analysis and is more user friendly than the APX namesakes.

On the game side, several new games arrived in the last week: Shamus Case II, PINHEAD, WINGMAN, BASEBALL, and ZAXXON on disk. I will let Phil fill you in on everything at the next meeting and/or in his article next month. Except for WINGMAN (sorry Phil). WINGMAN just replaced JUMPMAN at work as our favorite lunchtime game (bet you didn't think companies like Honeywell buy ATARI's, did you.) WINGMAN is a Microprose program that sells for \$30. From 1 to 4 players can play simultaneously in a highly interactive airplane battle simulation. Your objective in WINGMAN is to defend your home country from enemy bombers while attacking the enemy homeland with your bombers. Split screens with independent scrolling provide excellent game play.

Well, now is the time to talk all of your friends into getting ATARIS. With 400s available for \$150 locally and <\$130 mail order and 800s available for \$480, it is a hard deal to pass up. And when you add in the \$50 rebate on 400s and the \$100 rebate on 800s, it almost makes it worth getting two and saving one for spare parts.

NOTICE: Phil informs me that ZAXXON on disk does not run on ATARI's with the fast floating point chip installed, at least not without some modification to the program. Apparently, the ZAXXON protection mechanism does a checksum of the operating system to see what rev it is running on. Really, really stupid DATASOFT. This kind of protection means that you are buying throw away software, since when you upgrade your OS sometime in the future, you might as well throw away the software.

News from the Library

Wayne Vasel and Jim Shultz will be your new head librarians from now on as I am leaving for another position within the group. I thank all the people who have helped me in the past with the library and apologize to anyone who didn't get service. I wish Wayne and Jim the best of luck.

There is no listing of the programs for the next month due to the change of librarians. I am sure Wayne and Jim will get a handle on it by the next newsletter.

People who subscribed to Analog magazine through the user's group can obtain their copy of the program diskette from Bill Sommers (432-0395). This is limited to people who subscribe to the magazine only. There are a few extra copies at the meetings for distribution to people who subscribed outside the group. We require that you bring the magazine with the mailing label on it for proof of subscription.

Those of you who would like to volunteer your time and effort in making up disk or cassettes of the months should contact Wayne Vasel at 427-7922. We do offer a small remuneration for your time.

That's all for this month. See you at the meeting.

This article is from Lance Welch concerning the contents of the book library. PHONE # 427-2312.

Title: THE BOOK LIBRARY BY LDW

The book library contains a number of books which can be checked out and Newsletters from ATARI clubs around the nation which cannot be checked out.

The books may be checked out for one week minimum. If more than one person wants a book, the other persons must call the one who has the book and make arrangements to get the book. The list of books available for check out are:

De Re Atari; Explains in clear terms unique features of the hardware, software and Basic cartridge.

Atari Assembler; Explains the Assembler cartridge. It does not explain the 6502 instruction set.

Sams Micros; Operations Guide Summary; Operating Systems Manual; Explains operating system in detail.

Hardware Manual; Explains the operation of the hardware.

OS Listing Assembler; Listing of the operating system.

DOS Listing Assembler; Listing of the Disk Operating System

APX Catalog; Listing of programs available from APX (OLD).

Starting Forth; Excellent introduction to the Forth language.

Inside Atari; General explanation of your Atari computer.

COMPUTE! First Book of Atari; Collection of COMPUTE! magazine's articles about Atari.

ANTIC; Subscription to ANTIC magazine Atari Special Editions;

COMPUTE! Second Book of Atari; Collection of COMPUTE! magazine's articles about Atari.

Inside Atari DOS; Explanation of Atari's Disk Operating System.

COMPUTE! First Book of Atari Graphics; Collection of COMPUTE! magazine's articles about Atari Graphics.

Inside Atari Games & Recreation; Collection of games programs.

Mapping Atari; Describes the uses of Atari memory locations

The next list contains the reference copies of the newsletters.

MACE; Copies of the MACE (Michigan Atari Computer Enthusiasts) newsletter.

ACE; Atari Computer Enthusiasts, Eugene, Oregon

JACG; Jersey Atari Computer Group, High Bridge, New Jersey
Milatari; Milwaukee Area Atari Users, Waukesha, Wisconsin
Atari Computer Assoc of Orange County, Westminster, California
The San Diego Atari Computer Enthusiasts; San Diego, California
Current Notes; Reston, Virginia

NOT A PENNY MORE (OR THE SOFTWARE PURCHASERS GUIDE TO SALES TAX)

By Mike Doleman

I have recently been informed that many dealers are charging MN sales tax on all software packages regardless of the use of the package. Having been charged tax on several packages recently and questioned the necessity of charging the tax based on the information published in this newsletter last year, I called the Minn. Sales and Use office and inquired if the law had been changed since last year. No it hadn't and yes there were 3 classifications of software, 2 of which are taxable and one of which isn't. Yes, if a dealer charges you tax you are entitled to a refund and the dealer can simply make an adjustment on the form he sends to the state each month.

Now, a difference in opinion may exist as to which of the three classes the package you buy falls into, and I offer the following logic to help determine a sales tax or no sales tax item, said logic also being offered to the agent of the state with whom I discussed the matter with on the phone, and said logic not being disputed by said agent:

The three classes of software are ENTERTAINMENT, LEARNING, and APPLICATIONS.

ENTERTAINMENT and LEARNING classes ARE taxable.

APPLICATIONS are NOT taxable.

If a program is not ENTERTAINMENT and is not LEARNING then it can only be APPLICATIONS.

Therefore if a program is not ENTERTAINMENT and is not LEARNING it is NOT taxable!

It is very interesting to note that there is some question as to the 3 classes the state sales tax office "created" for taxing purposes. If one had the ambition to obtain and examine the actual regulations themselves, what one would find is absolutely no mention of there being ANY class of programs subject to tax.

Mention IS made of various taxable situations relating to the DATA produced by a program, but not even a respectable hint that any program itself should be taxed. There is a paragraph which deals with TRAINING MATERIALS & SERVICES that are provided with the sale or rental of equipment, the materials of which are taxable. This is probably where the LEARNING class was conjured from.

The ENTERTAINMENT class is a mystery. It can only have been created as a rationalization that had there been Space Invaders & Pacman programs selling by the truckload when the regulations were written, the writers certainly WOULD HAVE INTENDED TO TAX THEM.

What is NOT taxable according to the regulations? Simply "Prewritten (canned) programs." Including "The sale of all property, including coded sheets, cards or magnetic tape, on to which such prewritten (canned) programs have been coded, punched or otherwise recorded is not subject to tax." I think disks and ROM chips safely qualify also, don't you?

So! The bottom line is that due to self serving and truly "creative" interpretation of the regulations by bureaucrats we have ENTERTAINMENT and LEARNING classes of software being nonlegislated into existence. I would recommend this as a truly fine example of "loose to the point of detached" construction of the law.

The same procedure was involved for the APPLICATIONS class, but since there is no need to question from whence it cometh for tax reasons, its immaculate conception will not be blasphemed.

Any one wanting to research the matter further may check Minn. Sales and Use Tax regulation 610 and/or call the Tax office at 296-6181.

Remember, pay your taxes, but not a penny more than you have to.

ATARI IN EDUCATION
BY GEORGE TOOPS

I am the computer coordinator at New London-Spicer High School in West Central Minnesota. I believe that we may be doing more with Atari in our programming curriculum than any other school in the state. 18 months ago our computer curriculum consisted of 1 Apple II, 1 timeshare terminal, and 35 students enrolled in 2 semester sections of Basic programming. Since I convinced the administrative people that we would be better off developing our curriculum with ATARIs, we have built an excellent computer lab with 12 ATARIs with color monitors, 3 printers, and Meccs ATARI network which is being used in both a full programming environment and a courseware environment. And most importantly, next year we have 240 students (out of 300 in our senior high) enrolled in one of the 4 levels of programming courses on the ATARI including a semester course devoted entirely to ATARI graphics and sound capabilities.

One of the exciting things we are doing this summer is offering a computer day camp for 5th through 8th graders through the community education department. We will take 24 kids per week with a morning and afternoon session each day. We will teach the operation of the ATARI along with some Basic programming and introduction to ATARI graphics. The cost is \$20 per student for 1 week and we will be offering it for 2 weeks. We have already had over 100 inquiries about getting one of the 48 available spots in the camp so interest seems to be booming. If anyone would like more information on what we are doing you can call me at 612-796-5221 or write to NEW LONDON-SPICER High School, New London, Minn. 56273.

NEW SOFTWARE RELEASES
By TRB

Continuing from last month...SHAMUS CASE II, WINGMAN, BASEBALL, FAMILY FINANCES, PINHEAD, CATNAP, RIVERRAT, THAX LAIR, HOLLYWOOD MEDIEVAL, SKY BLAZER, DANDI, ULTIMA II, POKER SAM, ABUSE, CYTRON MASTERS, BASM, LASAR ANT, JAWBREAKER III, ELIMINATOR, SNAPPER, ANTS, FLOYD OF THE JUNGLE, CHOPPER RESCUE, SPITFIRE ACE, BONKERS, NINBALL, COLLISION, GYPSY MOTH, STUNTRAP, DEMON ATTACK, EMBARGO, DANDI, STARBOWL FOOTBALL, COLOSAL CAVES, LEONARDO DE VIDEO, KSTAR PATROL, ADVENTURE IN TIME, KING ARTHURS HEIR, ESCAPE FROM VULCANS ISLE, THE NIGHTMARE, SEA DRAGON, TUTTI FRUTTI, LUNAR LEEPER, CANDY FACTORY, FORT APOCALYPSE, NECROMANCER, PRINCESS AND FROG, FORTUNE HUNTER, WALL WAR, ARENA 3000, CASTLE WOLFENSTEIN, TAX ADVANTAGE, and more. Yes, I know that not all of these are not new, but I am still trying to catch up. I will continue the list next month and hope to add DRELBS, SHADOW WORLD, DONKEY KONG, and probably 10 or 15 more new releases. Since the beginning of the year, at least 20 new programs have come out per month.

Questions and Answers
By BBB

Now that we are a two Atari family, I find that I have easier access to a computer than before. That's fine with me because we recently received a new poker game that has me intrigued (the male disk is out!) However, I am finding that I have many questions about the ATARI, as I'm sure everyone else does. Therefore I decided to write a column for the newsletter. If you have a question for which you can't find the answer, let me try to dig up an answer for you. If it is of general interest, I'll publish it in the newsletter. I'm hoping that this column will turn out to be both interesting and informative. Please mail your questions to Barb Burkey, 3546 Pilgrim Lane, Plymouth, MN, 55441 or drop them off with me at the meeting.

ERACE REVIEW LEARNING, DISABLED STUDENTS AND COMPUTERS:

A Teacher's Guide Book

(by Merianne Metzger, David Oullette, and Joan Thorman. Published by The International Council for Computers in Education [ICCE], 135 Education, University of Oregon, Eugene, OR 97403).

Our group is delighted to be able to review a book which has been co-authored by an ACE member, Merianne Metzger. This brief 48 page booklet is one of several published by ICCE at the University of Oregon. ICCE also publishes "The Computing Teacher", an educational journal which focuses on the practical application of computers within a variety of educational settings.

The booklet presents an overview of Learning Disabilities (LD) and the rationale for the use of computers with LD students. Included is information about software and hardware. The guide book also contains references for magazines, books, organizations, networks, research, and other bibliographies which can serve as additional resources for the educator.

Although this booklet is directed at LD computer applications, much of the information and several references are appropriate for other educational computer use.

We feel the reference section is of great value to computing educators, even though computer using groups are omitted as an educational resource. If the booklet has a weakness, it may be the failure to address the following critical issues:

1. The need for research validated software;
2. Testing techniques which match learner needs with appropriate computer assisted instruction (CAI);
3. The role of the computer as an aid in mainstreaming the handicapped.

This booklet is a valuable first step for educators entering the world of computers. Terminology, common concerns and hardware considerations are explained clearly and concisely. It also serves as a good introduction to the series of books and materials published by ICCE which were designed to assist computer using educators.

—Alice Miles Erickson (ERACE)

Sandra Hopkins (Applied Computer Enterprises and Services.

COURSEWARE IN THE CLASSROOM:

Selecting, Organizing and Using Educational Software

(Ann Lathrop and Bobby Goodson, Addison-Wesley, 1983, \$10. Softcover, 187 pages.

Ann Lathrop and Bobby Goodson have prepared a much needed reference book for teachers interested in using microcomputer software. **Courseware in the Classroom** is a practical guide to integrating educational software into the existing curriculum and managing it once obtained.

The organization of the book is very straightforward and logical. In fact, the design allows the information to be easily expanded into a series of inservice workshops adequately covering all concerns teachers and administrators might have about microcomputer courseware. The material is completely understandable and useful.

Lathrop and Goodson, who encourage the gradual introduction of micros into the school, skip the usual introduction to microcomputers and begin with suggestions on how to handle scheduling, movement, and classroom setup, and how to deliver, demonstrate and otherwise manage courseware shared by many teachers and students. In a manner useful to novices to computers in education, the authors next give an overview of software applications in all areas of the curriculum. The second section of the book, consisting of six chapters, deals specifically with several such applications, namely reinforcement and remediation, tutorials, simulations and demonstrations, approaches to problem solving, program development aids (such as authoring languages), and tools for teachers (including gradebook, curriculum management, test and exercise generating, and statistics programs). Each chapter is illustrated with screen displays of popular programs which typify the particular application in various subject areas. The authors define basic qualities each type of courseware should have.

The third section of **Courseware in the Classroom** deals with the important role of courseware evaluation. After referring the reader to Appendix C for sources of reviews, Lathrop and Goodson develop a lengthy list of evaluation criteria. By covering almost everything included on well-known evaluation forms, they have made Chapter 10 especially functional to anyone who has the responsibility of evaluating courseware. This information is useful for the identification of the best forms to use, or for the development of a school's own evaluation instrument, as well as for better understanding of published reviews. To further aid the evaluator, the next chapter contains completed evaluations done on three different forms and refers the reader to Appendix B for other copiable forms. The final chapter in this section describes the complete evaluation process from start to finish.

What happens to your software after it has been purchased? Section IV offers suggestions for organizing and managing the collection in a courseware library. Also included are guidelines for a policies and procedures manual which will govern the processing, circulation and protection of the collection.

The final section of the book is a courseware directory, complete with an order form for an annual supplement. One hundred and twenty programs designed for use on Apple, Atari, Commodore PET, and TRS-80 systems are described. Most are accompanied with references to reviews recommending purchase of the program.

The appendices include information on copyright regulations, a listing of publishers of cited courseware, and a copy of "Policies and Procedures for Selection of Instructional Materials" adopted by the American Association of School Librarians.

Courseware in the Classroom is an excellent text for an introductory course or workshop in computers in education. There is no difficult theory or terminology to wade through, just practical, understandable suggestions and guidelines. The reader will finish the book with a sense he or she has gained some useful information easily implemented in any school setting.

—R. DeLoY Graham

SUBMITTING ARTICLES TO TAIG By Modem BY TRB

Procedure for ASCII file uploading:

- 1) (dial up the computer) 541-2175
- 2) press return to obtain the username prompt
- 3) type TAIG and then press RETURN
- 4) type SET TERM/PASSALL then press RETURN
- 5) type CRE filename.ini then press RETURN (Pick any filename; plus your initials)
- 6) Now start the UPLOAD from your ATARI.
- 7) when the UPLOAD is done press the CTRL and Z keys to exit the file
- 8) now type LO to LOG off the system

After you transfer the file (and before you log off), you can type out the file to make sure it is correct by doing a TYPE filename.ini. You can also type DIR to see what other files are on the TAIG directory. If you don't have a modem, just supply me with a text file on magnetic media (disk or tape) at the meeting (I do return the media). (Owners of TEXT WIZARD, please print the article out to a DISK file before you give me the disk. Also, no margins need be set.) Please keep your lines to less than 50 characters wide, to accomodate our new split column printing.

FOR SALE: ATARI 800 48K w/BASIC. New condition, \$425. Call Bob Sable at 448-3630.

PROGRAMMING TIP

Need a quick and dirty reference to the variables in your program? Try SAVE"5"; , press RETURN and then BREAK before the screen fills.

Programming utilities make your work easier. From IPM:

BASIC HELPER-

This program includes a minidos, a hex->decimal converter, a renumber, a disassembler and a variable table search & display.14.95

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Due to popular demand, I decided to stock up on Elephant disks. I will be selling the disks for my normal low price of \$19/box, and will lower the price to \$18/box for quantity 50 or more sales. Because I usually run out of disks at the meeting, please call me before the meeting if you plan on buying any large quantity.

I am continuing the special deal on MAC65 and BASIC A+. These products are normally \$80, but I will maintain my old pricing of \$55 for a short time longer.

DISKEDIT, ULTRACOPY, and CARTDISK PLUS are all selling well. If you want to learn more about the products, give me a call or see me at the meeting. Pricing on these three products is \$25, \$20, and \$25 respectively (CARTDISK PLUS is only available to DISKEDIT owners). To order, send CHECK/M.O. to SOFT UNLIMITED, 3546 Pilgrim LN, Plymouth, MN 55441. Include \$1.50/item for postage.



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Do you have a subscription to the SOURCE? _____ (y/n)

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Next TAIG Meeting:
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TAIG - 7:00 P.M.

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